

**What is claimed is :**

1. Ball screw nut comprising:

A hollow screw threaded nipple made of a metallic having a plurality of spiral grooves at the inner surface for plurality of  
5 rolling balls to roll along therein; and

A housing formed of a plastic material enclosing around said screw threaded nipple, said housing and said screw threaded nipple being firmly engaged with each other.

2. Ball screw nut of claim 1, wherein said housing is  
10 engaged with said screw threaded nipple by plastic ejection mold process.

3. Ball screw nut of claim 1, wherein said housing is engaged with said screw threaded nipple by supersonic binding process.

15 4. Ball screw nut of claim 1 wherein the outer surface of said screw threaded nipple is made uneven with several grains.

5. Ball screw nut of claim 1, wherein the outer surface of said housing is formed with screw threads.

20 6. Ball screw nut of claim 1, wherein the outer surface of said housing is formed with a flange.

7. Ball screw nut of claim 1, wherein several asylum slots parallel to said spiral grooves are formed on said screw threaded nipple.

25 8. Ball screw nut of claim 7, wherein several extension members are formed on said housing and are extending into said asylum slots.

9. Ball screw nut of claim 8, wherein each said extension member is equipped with a ball interrupter.

10. Ball screw nut of claim 8, wherein several circulation grooves are formed on the outer surface of said housing.

5 11. Ball screw nut of claim 10, wherein the width of said circulation grooves is slightly greater than said rolling balls.

12. Ball screw nut of claim 8, wherein outer surface of said housing is covered with a cover plate.

10 13. Ball screw nut of claim 12, wherein said cover plate is formed of a plastic material by ejection mold process.

14. Ball screw nut of claim 1, wherein several circulation holes are formed on said screw threaded nipple to connect each pair of adjacent spiral grooves.

15 15. Ball screw nut of claim 14, wherein several protruded blocks are formed on the inner surface of said housing and protruded into said circulation holes.

16. Ball screw nut of claim 15, wherein a circulation groove is formed on the inner surface of each said protruded block.

20 17. Ball screw nut of claim 1, wherein an long hole elongated in the direction parallel to the longitudinal axis of said ball screw nut is formed on said screw threaded nipple.

25 18. Ball screw nut of claim 17, wherein several protruded blocks are formed on the inner surface of said housing and protruded into said long hole.

19. Ball screw nut of claim 18, wherein a circulation groove is formed on the inner surface of each said protruded block.

20. Ball screw nut of claim 19, wherein each pair of  
5 adjacent spiral grooves are connected each other by said circulation groove, and the width of said circulation grooves is slightly greater than the diameter of said balls.

21. Ball screw nut of claim 20, wherein each said  
protruded block has more than one circulation grooves.

10 22. Ball screw nut of claim 1, wherein several circulation holes are formed on said housing, the diameter of said circulation hole is slightly greater than that of said balls.

23. Ball screw nut of claim 22, wherein several circulation grooves are formed on both side surfaces of said housing, and said  
15 circulation grooves are connected to said circulation holes.

24. Ball screw nut of claim 22, wherein several notches are formed at both side surfaces of said screw threaded nipples.

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